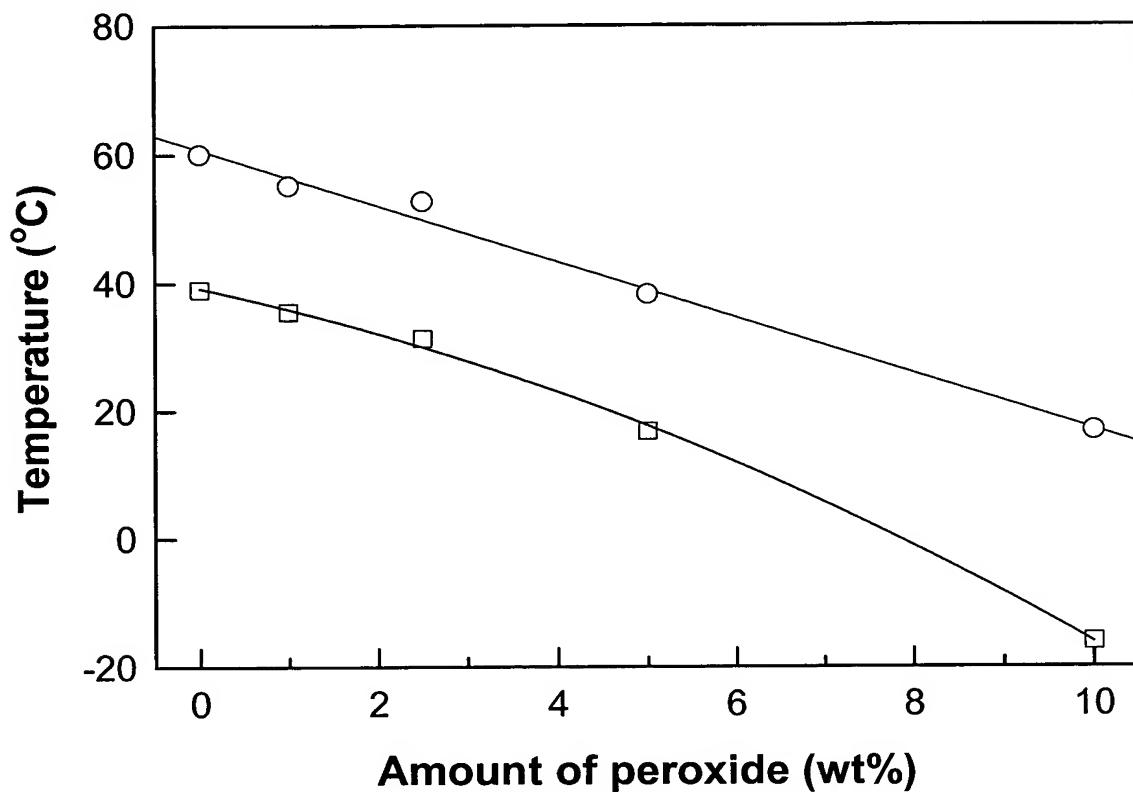
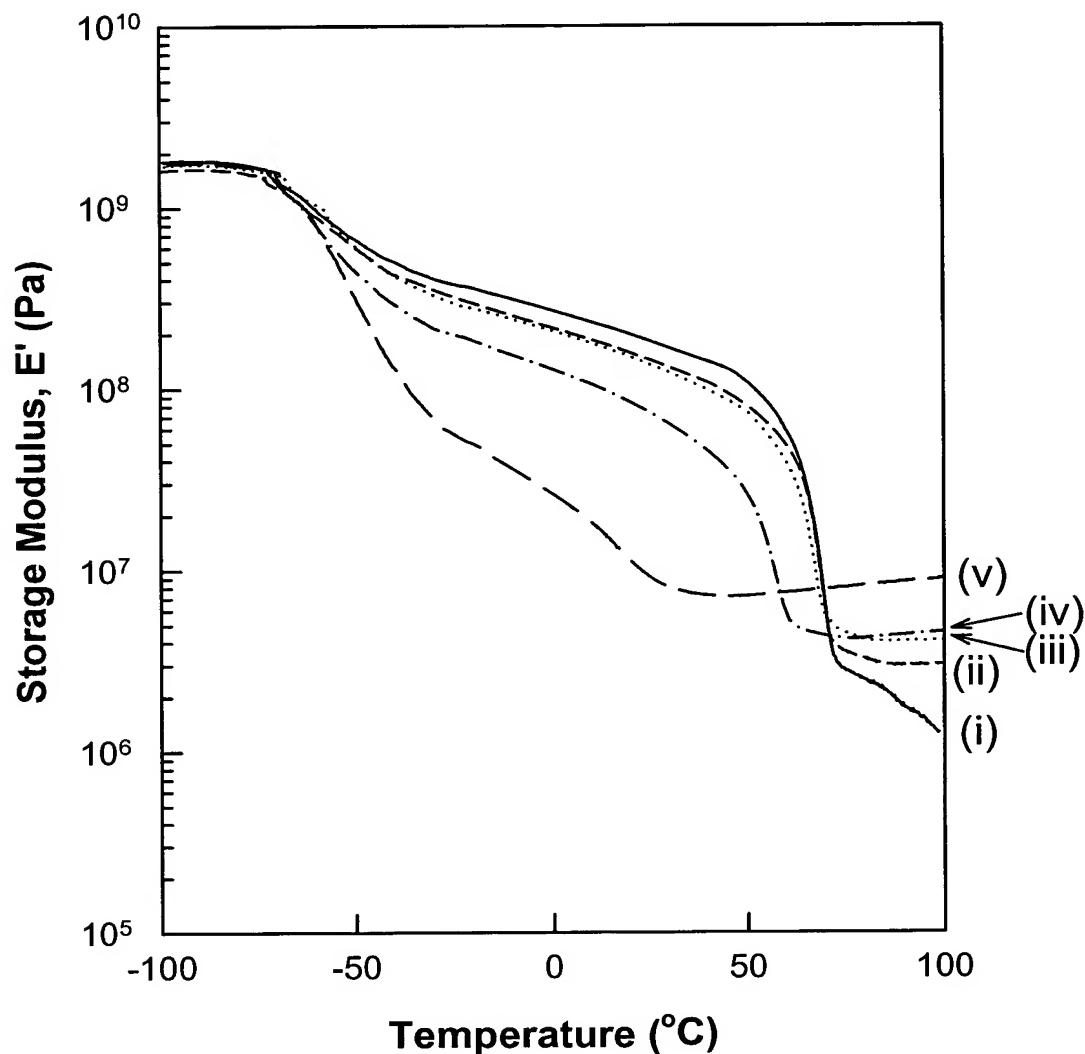


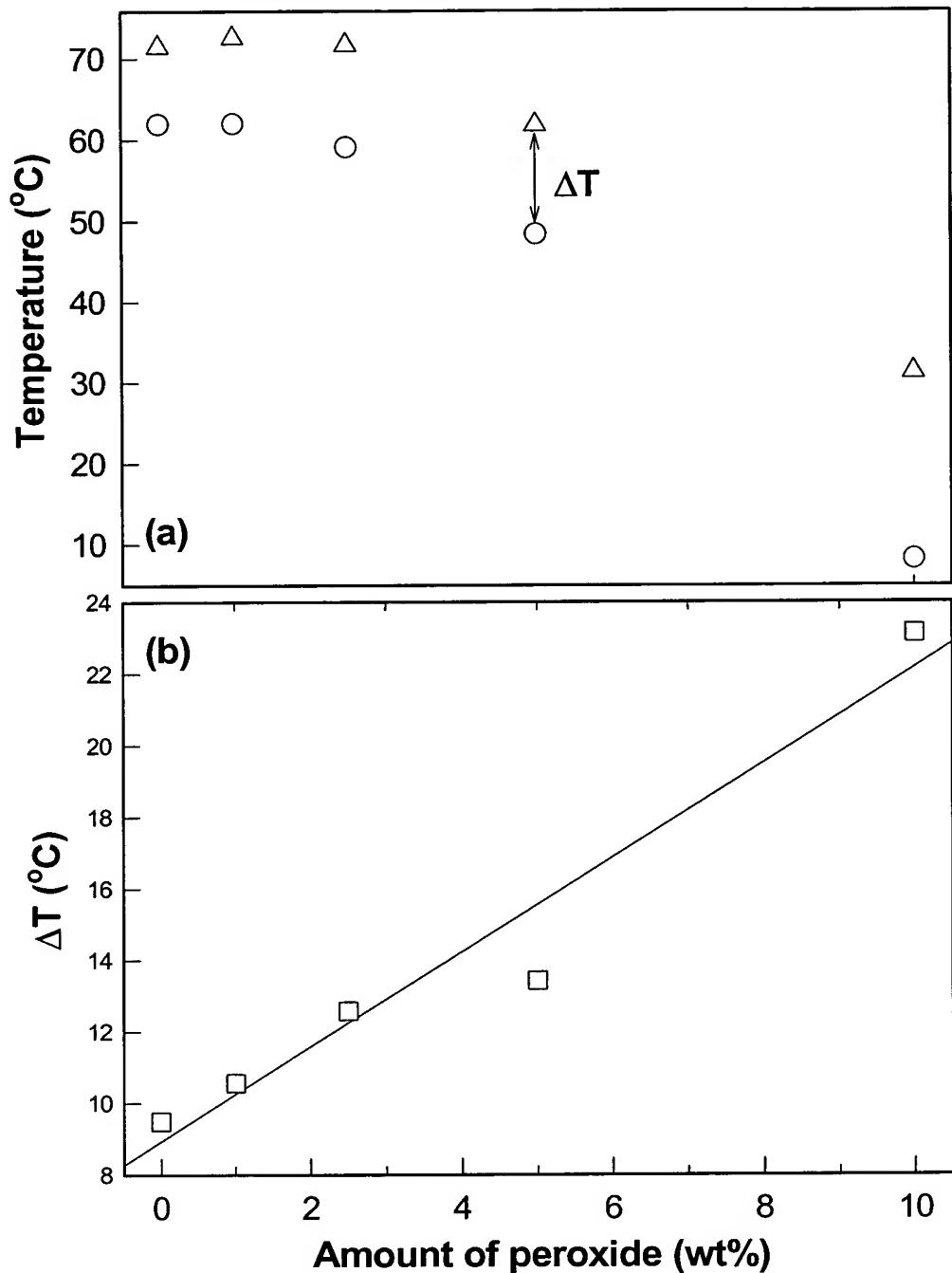
**Figure 1.** Dependency of amount of added peroxide on melting (○) and crystallization (□) temperatures of cured PCO.



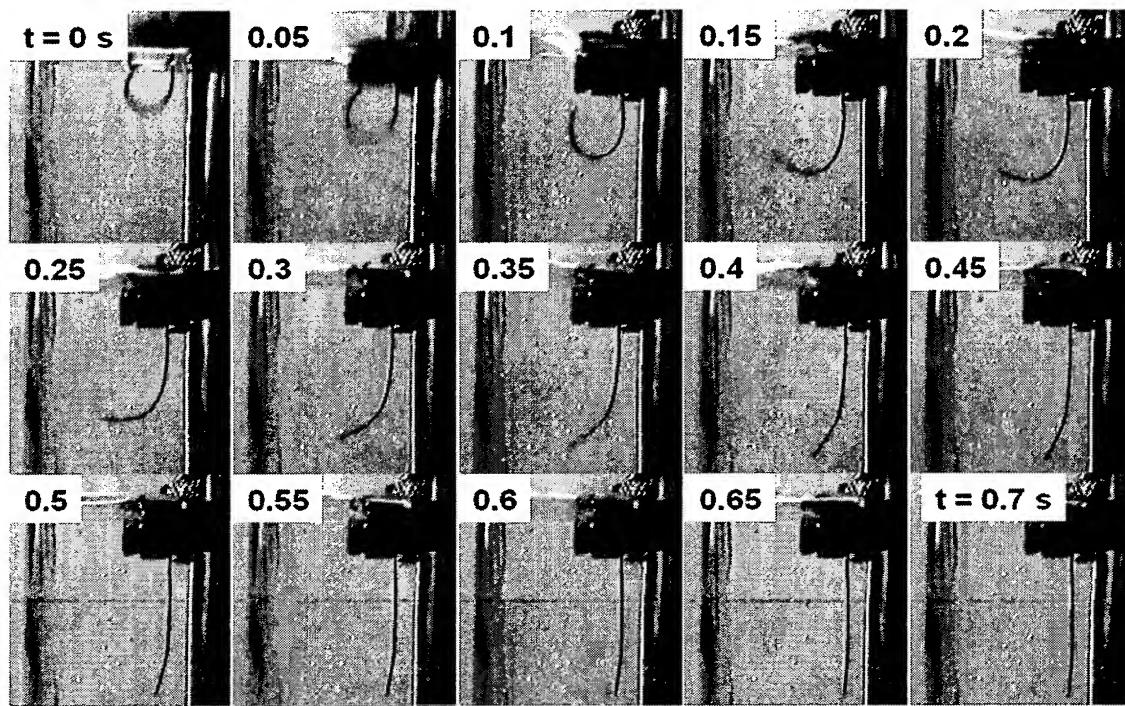
**Figure 2.** Tensile storage modulus ( $E'$ ) vs temperature for cured PCOs in a linear stress oscillation mode using 1 Hz of frequency and 4 °C/min of ramping rate: (i) DCP 0 %, (ii) DCP 1 %, (iii) DCP 2.5 %, (iv) DCP 5 %, and (v) DCP 10 %.



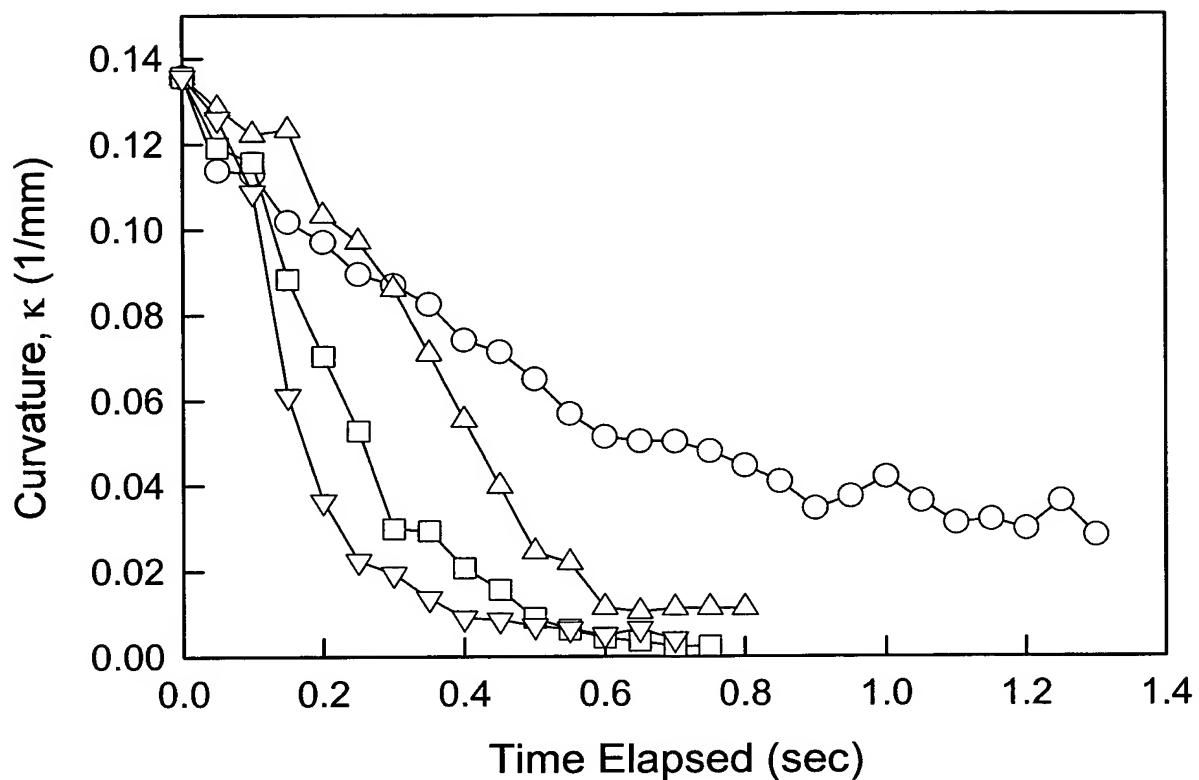
**Figure 3.** (a) Dependency of amount of added peroxide on  $T_1$  (○) and  $T_2$  (△) which are the onset and the end temperatures of transition, respectively, determined from curves in Figure 4; (b)  $\Delta T$  (□) vs amount of added peroxide, where  $\Delta T$  is the difference between  $T_1$  and  $T_2$ .



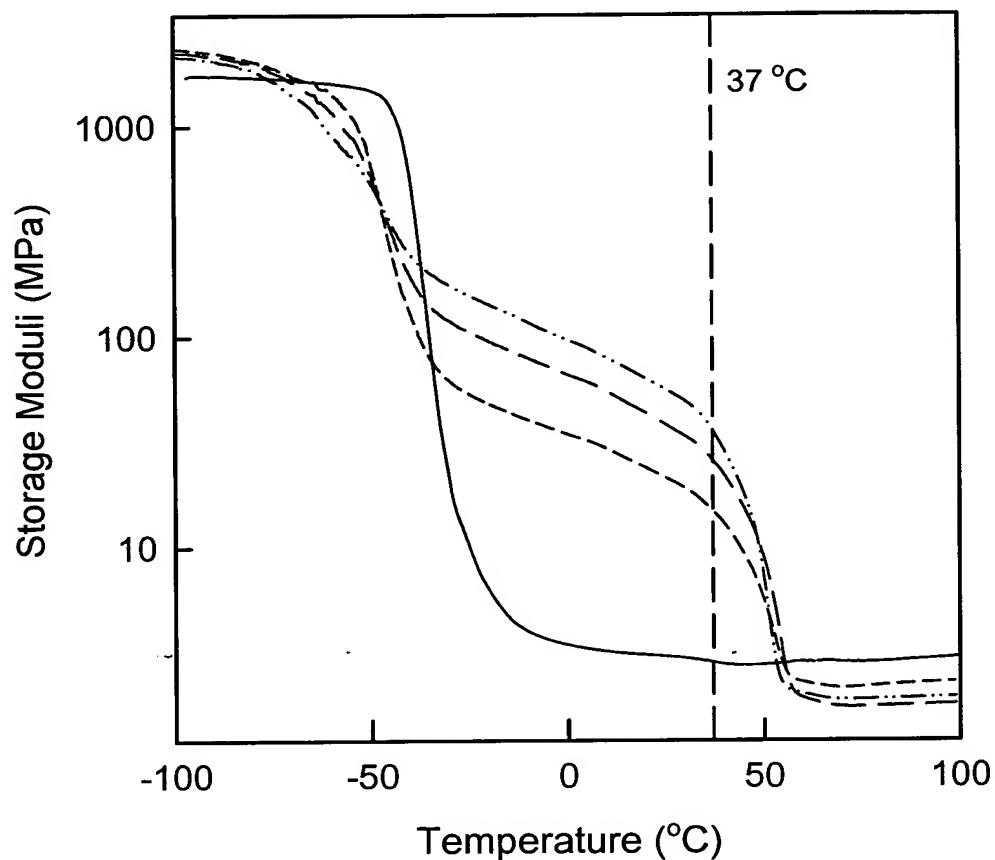
**Figure 4.** Shape memory behavior of PCO with DCP 2.5% following rapid immersion in water at  $T = 70$  °C. The sample undergoes the transition from temporary shape (circular) to permanent (linear) within 0.7 sec. The sample is colored in red.



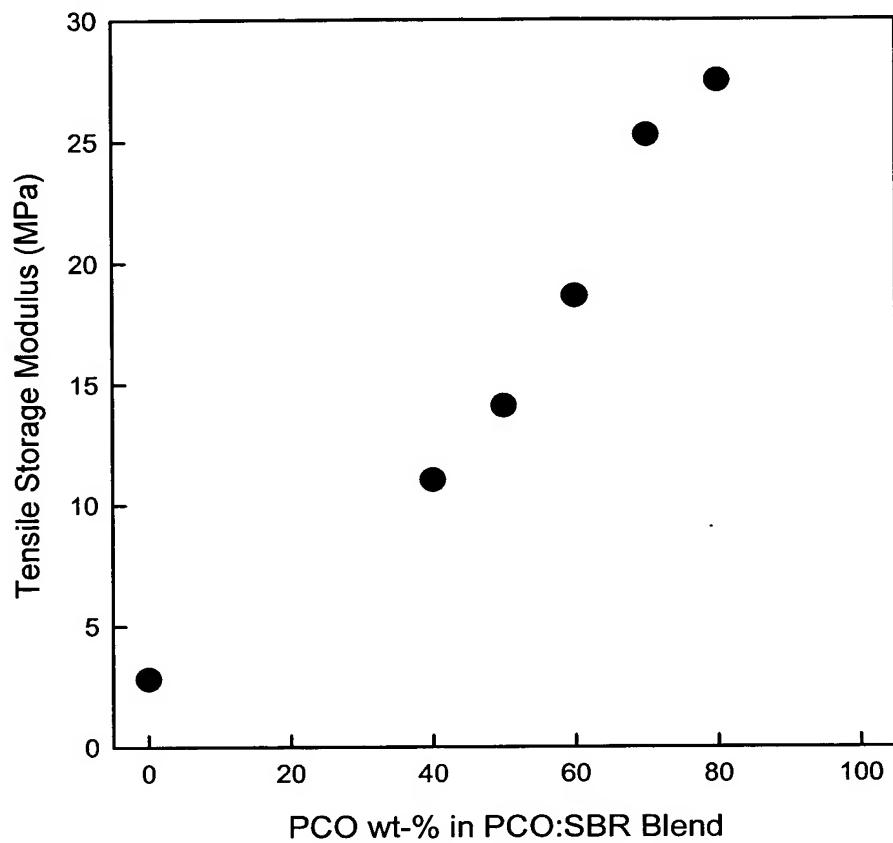
**Figure 5.** Curvature,  $\kappa$ , versus time elapsed at  $T = 70^\circ\text{C}$ : (i) DCP 0 % ( $\circ$ ), (ii) DCP 1 % ( $\triangle$ ), (iii) DCP 2.5 % ( $\square$ ), (iv) DCP 5 % ( $\nabla$ ).



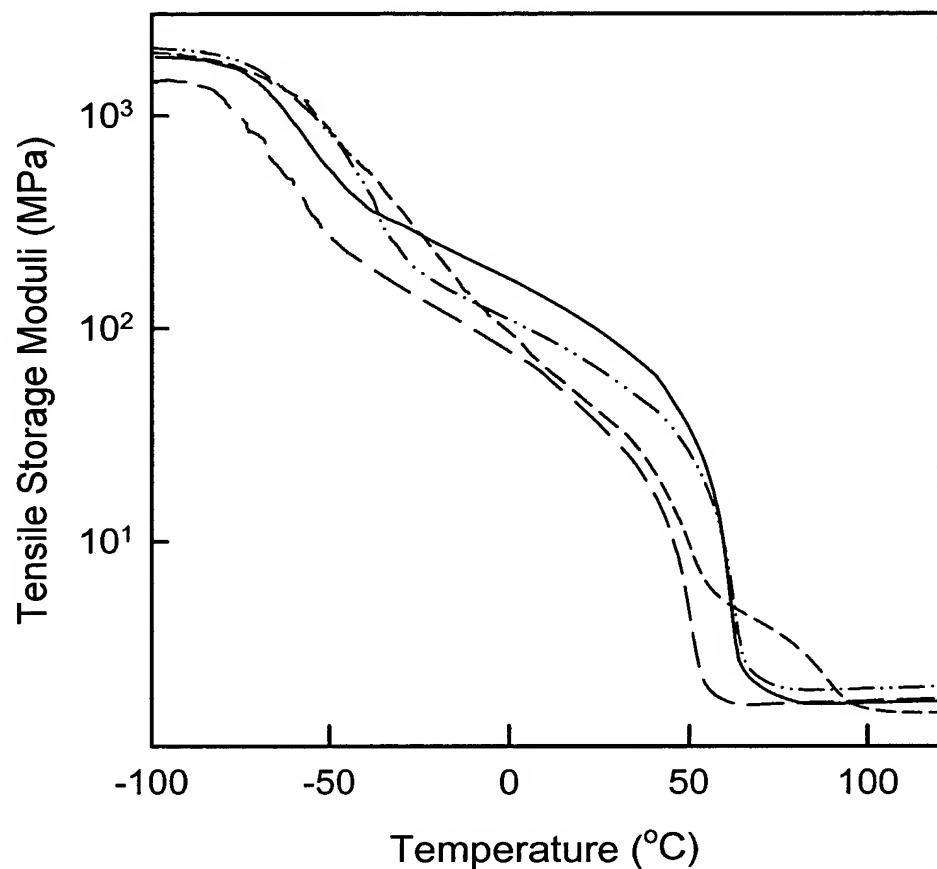
**Figure 6.** Tensile storage modulus ( $E'$ ) vs temperature for cured PCO:SBR blends in a linear stress oscillation mode using 1 Hz of frequency and 4 °C/min of ramping rate: (i) Solid line: SBR, (ii) Short dashes: PCO:SBR (40:60), (iii) Long dashes: PCO:SBR (60:40), (iv) Middle dashes: PCO:SBR (80:20). (All samples were melt mixed with 1% of DCP and crosslinked at 180 °C for 30 minutes)



**Figure 7.** Dependence of tensile storage modulus on PCO wt-% in PCO:SBR blends prepared by melt blending and crosslinking with 1 wt-% PCO at  $T = 180^{\circ}\text{C}$  for 30 min.



**Figure 8.** Tensile storage modulus ( $E'$ ) vs. temperature for cured PCO blends in a linear stress oscillation mode using 1 Hz of frequency and 4 °C/min of ramping rate: (i) Solid line: PCO-8012, (ii) Dashes with double dots: PCO-8012:SBR (75:25), (iii) Short Dashes: PCO-8012:EVA (60:40) (iv) Long Dashes: PCO-8012:PCO-6213 (50:50). (All samples were melt mixed with 1% of DCP and crosslinked at 180 °C for 30 minutes)



**Figure 9.** Augmentation of composite storage modulus at 37°C (open) and 60 °C (filled) with amount of filler added (an almost linear relationship was observed within the experimental range).

